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COUNTDOWN
Calling time on Neglected Tropical Diseases

Neglected Tropical Diseases and the Health Workforce: Challenges affecting effective implementation of Mass Drug Administration (MDA) in Liberia

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Key Messages

- Training length was described as too short at all levels of the NTD training cascade due to high staff workload and funding limitations. Training at the CDD level is mainly focused on drug distribution using a measuring stick and eligibility criteria. Training at this level should increase the focus on medicine side effects and disease awareness. Health facility staff and CDDs requested the provision of training manuals/materials. The introduction of Liberia's Community Health Assistant (CHA) programme has resulted in some CDDs who are more adequately trained in health service delivery, including a focus on NTDs, than other CDDs who are not CHAs. CHA training has therefore improved MDA delivery where CHAs are also functioning as CDDs and options for CHAs to support other CDDs could be considered.

- Supervision practices at county and community level do not appear to be standardised with varying levels provided. Most CDDs received ad-hoc and limited supervision which was only provided during MDA. Limitations in logistical and financial support as well as workload of the health facility officer in charge and county health team were the primary challenges to the provision of adequate supervision. CDDs wanted supervision to be more formalised so that they could reach their bosses when challenges arose. CDDs who were also functioning as CHAs received more frequent supervision, normally provided by the Community Health Services Supervisor (CHSS).

- Some CDDs described having to use their own funds to support programme delivery. Costs incurred included transportation to collect medicines and feeding during distribution. This was exacerbated because community level incentivisation or remuneration previously encouraged by community directed treatment approaches was no longer working due to community perceptions that CDDs were paid well by the programme.

Figure 1. Community Health Volunteer, Maryland

- A lack of protective clothing and supplies for CDDs such as rain equipment, calling cards, ID badges etc. limited CDD motivation. However, intrinsic motivation, including receiving of respect from communities and seeing benefit of medicine distribution contributed to enhancing CDD performance and engagement.

- Demand for financial remuneration was a key challenge for programme staff at all levels of the health system. Provision of financial remuneration by other programmes and the CHA programme appears to have enhanced motivation at the community level. Inequities in existing incentive or remuneration structures (if not carefully managed) has the potential to negatively impact staff attrition and motivation.

Background

Liberia's health system is recovering following prolonged conflict and humanitarian crisis. Access to health care is frequently lacking, particularly in rural areas, and following the Ebola epidemic, trust between communities and the health systems broke down (1). Strengthening the health system to promote trust and ownership of health interventions in Liberia is essential to ensure adequate health and social protection for all and support progress towards the Sustainable Development Goals. Liberia's Neglected Tropical Disease (NTD) programme targets four NTDs through preventive chemotherapy (onchocerciasis, lymphatic filariasis, soil transmitted helminths and schistosomiasis) using mass drug administration. These diseases disproportionately affect poor, rural and marginalised populations in Liberia and understanding how to reach these communities with existing NTD interventions is essential in ensuring health for all.

In 2012, the World Health Organization (WHO) released a roadmap for implementation aimed at 'accelerating work to overcome the global impact of NTDs', with specific targets and commitments from countries to strive toward control and elimination of many NTDs by 2020 2, 3, 4, The focus of control and elimination efforts has predominantly been in relation to the Preventative Chemotherapy (PC) NTDs, namely; onchocerciasis, lymphatic filariasis, trachoma, schistosomiasis and soil transmitted helminths 3, 4. Despite such focus, in many contexts there is a significant implementation gap between impending control and elimination targets and slow progress to date 3. As such, it has become critical to understand what factors are hindering progression, and what can be done to scale-up and progress toward these goals.

In 2015, the COUNTDOWN consortium, funded through the UK Department for International Development, was established with an overall goal of reducing mortality, morbidity and poverty associated with NTDs 5. The consortium is focused in four countries; Ghana, Cameroon, Liberia and Nigeria, and is conducting implementation research to address current NTD programme bottlenecks with a view to accelerate progress toward control and elimination of PC NTDs.

This brief is one output of the work completed in Liberia. This research was designed to address and explore key challenges in ensuring equitable NTD programme delivery in Liberia. Implementation challenges to be explored were identified through a participatory stakeholder meeting during project inception. This brief responds to challenges identified by stakeholders in relation to the NTD health workforce and understanding the best ways to train, motivate and supervise them across all levels of the health system.

Methods

This study was completed between January 2017 and January 2018 in Maryland and Bong County, Liberia. The study used a variety of qualitative methods to elicit the views of stakeholders engaged with the NTD programme at all levels of the health system, including; the community, health facility, district, county, and national level. The findings from methods used at different levels were triangulated and synthesised into key outcomes.

Study Sites: Figure one shows the cascade of purposive study site selection to achieve maximum variation in disease endemicity and prevalence, programme impact (measured by geographic and therapeutic coverage), literacy, wealth and geography.

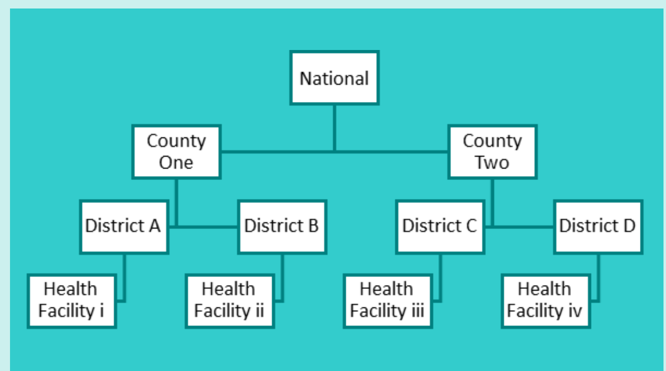


Figure 1. Study Site Selection

Data Collection and Analysis

Key Informant Interviews: Thirteen key informants were conducted with purposively selected stakeholders at the national, county, ***district*** and facility level. Only staff directly involved in NTD programme delivery (specifically MDA) were involved. This method was used to explore the realities of MDA implementation from a health systems perspective and focused on what helps and hinders the programme with specific reference to financing, leadership and governance, health workforce and service delivery.

Life and Job Histories with Community Drug Distributors (CDDs): Forty-two life histories were conducted with purposively selected CDDs across both counties. Thirty were male and twelve were female. Maximum variation was also aimed for in terms of length of time engaged with the NTD programme and age. Life histories were used to explore CDDs' life and career history and elucidate their motivations for the work they do, training they have received, and the ways in which they are supported to fulfil their role. The purpose of these interviews was to understand current levels of job satisfaction and level of engagement with the NTD programme to be able to assess what strategies could be utilised to better support CDDs.

Community members

Focus Group Discussions and Social Mapping: Twenty-one FGDs were completed with purposively selected groups of community members to explore general perceptions of Mass Drug Administration (MDA) as well as health communication preferences. FGDs incorporated the use of participatory social mapping to explore community structures (physical and social) that are currently used or could be better used in NTD programme delivery. Separate groups were completed with men, women and youth and influential community members (also separated by gender).

In-depth Interviews with acceptors, refusers and absentees linked to LF, Onchocerciasis and STH MDA: Forty-one in-depth interviews were completed with purposively selected community members to understand their knowledge, perceptions and experiences of existing MDA strategies. Table one below shows the variation in participants spoken to:

***Table* 1 – In-depth interview study participants (LF, onchocerciasis, STH)**

	Men			Women			Total
	18-25	25-49	Over 49	18-25	25-49	Over 49	
Those who take MDA	2	3	4	2	9	1	21
Those who refuse to take/absent during MDA	1	5	4	2	6	1	19
Total	3	8	8	4	15	2	40
	19			21			

In-depth Interviews with parents of school aged children linked to schistosomiasis MDA: Nineteen in-depth interviews were completed with purposively selected parents of school aged children to understand their knowledge, perceptions and experiences of existing MDA strategies for Schistosomiasis. Mothers and fathers were interviewed separately but as 'sets' to try and understand variation in view points and decision making within one household. Table 2 below shows the variation in participants spoken to:

Table 2- In-depth interview participants (schistosomiasis)

	Parents of School Aged Children (number of sets- 1 mother and 1 father per set)	
Those whose children take MDA	5 (full sets) 1 (no father)	11
Those who children refuse to take/absent during MDA	2 (full sets) 2 (no father) 2 (no mother)	8
Total	12 (19 participants)	

Data was conducted for all methods until saturation was reached. Data was analysed using a thematic framework approach.

Key Findings

Inadequacies in training delivery: duration, content and materials

Training for the delivery of mass drug administration is cascaded through the health system using a train the trainer model. National NTD programme staff train the county NTD focal point; the county NTD focal point trains district health officers; district health officers train the health facility officer in charge (OIC); and the OIC trains the CDDs.

Key informants described that trainings scheduled for 3 days had to be reduced to 1.5 days to minimise subsistence costs. At the county, district and health facility level, the multiple roles played by health personnel who are also engaged in the NTD programme often left them overburdened and restricted the amount of time they could devote to delivering NTD training activities. For example, some county NTD focal points were also functioning as the county surveillance officer or engaged in other programme activities such as HIV or Malaria.

Overburdening was a challenge at facility level, where OICs who themselves may have received rushed training for the first time, had to find time between routine clinic activities to complete the training cascade. This was compounded by a lack of distribution of training materials, meaning one officer in charge had *'recorded the training on [his] phone to help [him] understand better as there was no manual for [me] to review'* (Officer in Charge, COUNTY).

'The training is to last for three days but it actually lasts for one and a half because if people sleep over you have to give them per diem which the programme don't have. The second day is mainly for logistics' **(National NTD Programme Staff, Male).**

'Since the time we started we been training. The last time we had our training of the trainer for two days. The training days depends on funding availability, err adequacy or inadequacy of funding. Because like for this recent training health workers were trained for one day. But the actual training days supposed to be three days' **(National NTD Programme Staff, Male).**

At the community level, most CDDs described that prior to MDA they received training that focused on how to give out medicines using a measuring stick and reviewing eligibility criteria. The majority of CDDs felt that the training duration (1-2 hours or half a day) was too short. Some CDDs described short training duration as being linked to delays in drug delivery to the health facility which meant if they weren't distributed quickly then they would expire. Most CDDs described a need to extend the training time and content. The majority of female CDDs prioritised an increase in length of training to at least 2-3 days in advance of distribution as it involves humans. Whereas male CDDs presented a demand for more information about medicine side effects and disease awareness. Both male and female CDDs felt that the provision of training manuals and IEC materials would support their work in the community.

'I want them to give us some materials like training book or anything something that we will be reading through' **(CDD, Male, Bong)**

'it can be short...because that drugs you are carrying in the community...you don't have to make mistake. The mistake you made maybe the life you were saving, you be damaging…the time frame of training is too short. At least they could make it two day, three days...the third day where they can test you whether you understand it or you don't understand it, they ask few questions that you will not [be] able to make a mistake in the field if you do go.' **(CDD, Female, Maryland)**

Some CDDs have recently been engaged in the new community health assistant programme recently established by the Liberian Ministry of Health. The CHA programme is designed to establish a more formal community health cadre called community health assistants (CHAs) who have gone through a four-modular training programme. The policy stipulates that CHAs should also receive a monthly stipend of USD75 and supervision from community health services supervisors (CHSS) who are formally trained health personnel such as nurses or midwives recruited to the CHA programme. CDDs who were also CHA's described how the NTD focus in the CHA training programme was thorough and provided them with a lot of necessary skills to be able to complete the drug distribution activities.

'This training (CHA training) I said each module lasted for one month. We did four modules and each module lasted for one month. So, we started March and we ended in June.' (CDD, Male, Bong)

'The one day really, I did not get everything I'm supposed to get, the training supposed to be very much intensive, but the one-day training will not make you to learn everything you supposed to learn. That one day make us to get some things but not everything we got. Yeah, the days should be almost one week or even four days will be ok' **(CDD, Male, Bong)**

Logistical and human resource limitations impact the adequacy of supervision

The MDA period normally lasts for about one month for CDDs. During this time, CDDs described receiving varying levels of supervision.

A few described that they receive supervision at least twice during the distribution period, whereas others described that they might receive some supervision, but the timing is not pre-determined. Some CDDs also described that once the programme is over, *'no one cares about them anymore'* and no more supervision is provided.

Those CDDs who are also engaged with the CHA programme tended to describe receiving supervision more frequently than others, normally from the CHSS, although timing was still not predetermined due to CHSS workload. Most CDDs spoken to described that they would like supervision to be more regular and formalised so that they could reach their bosses when challenges arose; some also felt that supervision in between MDA campaign periods would help them to remain engaged with the programme. CDDs described various supervision methods that they would be happy to receive, including over the phone supervision, regular meetings at the health facility and visits from their supervisors in the community.

'the county health team supposed to check on us…Nothing for me nobody can check me check on me. So, myself too I say...It is better for me to pick up cutlass and go on my farm' **(CDD, Male, Maryland).**

'The programme needs to be effective by monitoring, because you cannot send me on the field maybe I am working for one week without monitoring me'**(CDD, Maryland, Male).**

Training Materials can improve CDD satisfaction

Key informants reinforced that supervision was irregular and ad-hoc at the district and community level and only took place at the end of the MDA period so that the supervisor could collect their report. This was also the case for supervision of county NTD focal points by national NTD programme staff with scheduled monthly supervision only happening once a quarter. Despite difficulties in face to face supervision at county level, communication via email and telephone with the national NTD team was more frequent. Key informants described supervision challenges at all levels as being linked to limited logistical (e.g. availability of motorbikes) or financial support (e.g. for feeding or transportation). At the community level, OICs also described workload as a key barrier to being able to deliver supervision activities as they were often *'unable to visit communities due to [my] busy schedule'* (OIC, Maryland).

'in as much as err it may sound like it should not be brought to the table and discuss openly, but the fact remains that it is a primary factor that effect deliverables. Many health workers in the counties and other area will complain that they don't have adequate (stuttering) logistic. Some of them don't have access to computer or internet services. They don't have access to sufficient hmm gasoline for example to run the motor bike**' (National, NTD Staff, Male).**

Some key informants felt that the introduction of the CHSS cadre had the potential to improve supervision at the community level, particularly for CDDs also involved in the CHA programme. Informants also emphasised a lack of provision within NTD plans for district level staff to be engaged with the programme, particularly regarding supervision, and felt that this cadre could be of key benefit in delivering clinical supervision during MDA activities. Key informants at the facility level also described that there is potential to engage community heads and health centre committees in supervision activities.

'at the community level, they have facilities in the counties. We have what we called …Community Health Services Supervisor at the health facilities. They are responsible to supervise the community health assistants who work in that community. So at those facilities they have weekly meetings…So they come to the facilities and they run the meetings' **(National, NTD Staff, Male).**

Lack of financial remuneration contributes to limited motivation and attrition of the NTD health workforce at all levels of the health system

A lack of financial remuneration at all levels of the health system caused challenges to staff retention and motivation. At the national level, key informants described a lack of provision of salary or standardised incentive structure with various staff members within the national NTD programme team receiving different levels of salary or incentive support depending on the NGDO partner supporting their role or area of work. This can lead to some staff feeling demotivated to engage significantly with the programme as well as attrition when opportunities presented to work on higher paid programmes or roles within the NTD team. The same challenge exists at the county level, with county health team members who are involved with the programme receiving little or no financial incentives. Due to the multiple roles played on multiple programmes (as described above) by county health staff, the lack of financial support paid by the NTD programme often meant that it was less prioritised than other programmes who provided higher amounts of financial remuneration.

'but one of the things they will complain of is that largely the salary. The remuneration that goes to them as health workers. As long as these people believe that what they are getting does not commensurate with the work you want them to do, it becomes difficult to get them delivering' **(National NTD Programme Staff, Male).**

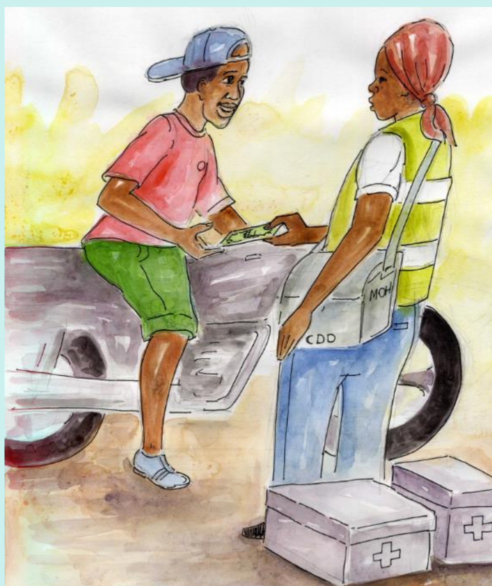
Implementation of MDA is described as drawing on community directed treatment models that promote community ownership and rely on community members to incentivise CDDs. However, most CDDs described that community remuneration or incentivisation is not working because there is a perception that CDDs are paid well by the programme. In some cases, in Maryland County, men were being accused of being paid and not bringing the money home to their family. This meant they had to divide their time and had the additional work of also having to go 'hustle' for their family. Key informants described that financial challenges because of the CDD role frequently led to CDD attrition in some areas. Some CDDs described preferring to work for other programmes as they provided financial remuneration e.g. polio.

The newly introduced CHA programme was described as providing salary for both training and service delivery which made CDDs who were also CHAs excited to do their work.

'…but the challenges are you will work submit your report and go back home with empty hands. And in your home, you will be questioned sometime you are accused that the people pay you and (laughter) you use the money for different thing and if you are not strong in holding your heart…even the community members themselves can say to you that you say there is no money in this thing but always you agree to work' **(CDD, Male, Maryland).**

CDDs described using their own money to implement programme activities having an impoverishing effect on them and their household

Some CDDs described using their own funds to conduct awareness activities and drug distribution which was of detriment to them and their household. Specific costs were linked to paying for transportation to collect medicines as well as having to pay to feed themselves during the distribution. Key informants described that when reimbursements do happen, there is no guidance on standard amounts which can create friction amongst CDDs who are paid the same despite varying travel distances to training venues and central meeting points.



Implementers are facilitating programme delivery through out of pocket spending

'I was feeling bad because the time they give us the medicine we pay our way, we walk to far, far distances to give this medicine that is suffering there. We move from there for nothing, we didn't get nothing' **(CDD, Female, Bong).**

It's not all about money: supplies and other factors have the potential to enhance CDD motivation

Financial remuneration was not the only factor that CDDs felt limited their ability or motivation to complete their role. Many CDDs described other factors that could support them in the delivery of the NTD programme, particularly MDA including the provision of rain equipment (boots and coats) and medicine bags. Some CDDs requested calling cards to be able to liaise with supervisors and ID badges so they were identifiable. Others asked for bikes to travel long distances as there were some areas 'they just could not reach by foot'.

Key informants described that as well as providing logistical support to cover large distances, reducing distances that CDDs had to travel through a reduction in the size of CDD catchment communities could improve motivation. Despite many CDDs describing a want for specific items to support them in their role, a few CDDs felt that the benefit of the knowledge they had gained from the training programme was enough to motivate them and expressed feeling happy when the community recognised them as a 'small doctor'. Others also described that the loss of relatives had led them to have a deep motivation to complete the role of a CDD and perhaps progress to becoming a health worker.

Phone calls as an effective supervision tool

Recommendations

This research has highlighted several challenges in implementing MDA linked to the NTD health workforce. Training duration at all levels was described as very short and there was no training manual or materials for health cadres to reflect. Health workers at all levels feel that they are not appropriately remunerated or supported in their efforts. A well supported and motivated health workforce is essential for the success of the NTD programme; therefore, the following recommendations will help shape the effective delivery of the NTD programme:

1. Training should be lengthened at all levels within the training cascade and cover all areas of programme implementation.

2. Training manuals and other associated materials (e.g. posters, leaflets etc) should be developed at the national level (including adaptations for the different levels of participants) and be available at all points on the training cascade. To reduce the burden on the OIC in the training cascade, NTDs could consider establishing a facility based NTD focal point who could be trained alongside the OIC and deliver training to CDDs. At the county level, the NTD focal point should have NTDs as their primary role, rather than having multiple roles, however this will rely on more flexible funding provisions to be able to support implementers and compete with other programmes.

3. Explore what would be the most effective methods of supportive supervision for CDDs in a resource limited programme and how existing community and health system platforms could be better leveraged to support alternative supervision models that are sustainable both during and external to the MDA campaign period. The use of mobile phones to improve communication between CDDs and their supervisors should be considered.

4. Research the impact of out-of-pocket expenditure on CDDs and frontline implementers, with an explicit focus on how this could be minimised.

5. Investigate the feasibility of implementing standardised procedures for the reimbursement of expenditure for CDDs and programme implementers during programme delivery. Guidelines should prioritise equity and look at relative costs based on distances travelled.

6. Lobby with NGDO implementing partners to provide equitable levels of support to NTD programme staff at the national level and explore how this can align to any existing Ministry of Health salary or incentive scales to ensure consistency in financial remuneration.

7. Explore the cost implications of providing essential logistical supplies and resources to CDDs and other frontline implementers. Examples of supplies that may be provided are rain gear, calling cards, bikes, ID badges and medicine bags. Consideration of how often these supplies should be provided (e.g. as a one off or annually) will be important.

8. Understand what opportunities there are for further integration of NTD programme delivery into new and existing community and health systems platforms for example the CHA programme. Ongoing financial remuneration by the CHA programme to some CDDs may present an opportunity for NTDs in integration and could harness evidence around the benefits of financial remuneration vs. other support packages in Liberia.

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COUNTDOWN (grant ID PO 6407) is a multi-disciplinary research consortium dedicated to investigating cost-effective, scaled-up and sustainable solutions to control and eliminate the seven most common NTDs by 2020.

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